

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF PENNSYLVANIA**

DAVID GRASINGER,)	
)	
Plaintiff,)	
)	
v.)	Civil Action No. 21-956
)	Judge Nora Barry Fischer
CATERPILLAR, INC.)	
)	
Defendant.)	

MEMORANDUM OPINION

I. INTRODUCTION

In this personal injury action, Plaintiff David Grasinger (“Grasinger”) alleges that he was injured by a spike tooth replacement part for a 336 Excavator which was defectively manufactured by Defendant, Caterpillar Inc. (“Caterpillar”) and brings claims under Pennsylvania law including, breach of warranty; negligence; and strict liability theories of manufacturing defect, design defect and failure to warn. (Docket No. 1-5). Presently before the Court is Defendant’s Motion to Exclude the Proffered Expert Testimony of David Pope and Mark Licurse and Plaintiff’s opposition. (Docket Nos. 45-47; 51-52). A *Daubert* hearing was held at which time the parties provided oral argument, the transcript of which has been considered by the Court, and the parties have also filed post-hearing proposed findings of fact and conclusions of law. (Docket Nos. 55; 58; 62-63). After careful consideration of the parties’ positions and for the following reasons, Defendant’s Motion [45] is GRANTED, in part, and DENIED, without prejudice, in part.

II. FACTUAL BACKGROUND

A. David Grasinger and the Incident

David Grasinger is currently in his mid-30’s, a high school graduate and experienced heavy equipment mechanic. (Pl. Ex. 3, Docket No. 53-3 “Grasinger Depo.” at 8-32). He spent five years

working for Union Pipeline as an excavator operator before being hired by Welded Construction, L.P. (“Welded”) in June of 2017. (*Id.*). There, he was tasked with operating a CAT 336FL Excavator with serial number RKB01523 (“Excavator”) to dig a trench for the placement of a natural gas pipeline. (*Id.* at 49-52; Docket No. 62-8). Welded did not own the Excavator nor its parts but obtained the equipment through another company, Cleveland Brothers. (Docket No. 58 at 14-15).

On July 27, 2017, while operating the Excavator, Grasinger encountered rocks in his digging path. (*Grasinger Depo.* at 51-54). He and a coworker attached a bucket that had “spike teeth”—ground engaging tools that assist in penetrating through tough, cohesive materials, such as rocks—to the Excavator so he could continue his work. (*Id.* at 54-56, 69). He testified at his deposition that the spike teeth looked new, as they had fresh yellow paint and clearly visible cast marks (i.e., the part numbers and the Caterpillar logo), and that he did not notice anything unusual about the spike teeth, the bucket, or the Excavator. (*Id.* at 54-56). While Grasinger was digging, one of the spike teeth from the bucket struck a rock, broke, launched into the closed, front window of the Excavator, and hit him in the lower part of his right leg, fracturing his tibia and fibula. (*Id.* at 69-70). He was immediately transferred to the hospital for treatment, and never returned to the site. (*Id.*). He stayed at Forbes Hospital for approximately one week, underwent surgery for the injury, and after a period of home health care, physical therapy, and occupational therapy, was approved to return to work without restrictions in March of 2018. (*Id.* at 70-73).

On August 7, 2017, Welded’s safety director, Charles Tyson (“Tyson”), filed an OSHA report documenting that the spike tooth failed under normal use and became a projectile. (Docket No. 47-1). The report detailed that Grasinger was “removing soil from a partially exposed rock. The tooth broke approximately halfway down and the broken piece was projected toward the cab.”

(*Id.* at 2). Tyson concluded that, “[t]he manufacturer has been notified of the failure and a representative will be dispatched to inspect the failed part and investigate the failure.” (*Id.* at 3).¹ On August 11, 2017, Cleveland Brothers filed an Incident Report directed to Caterpillar, explaining that at 7:00 A.M., Grasinger “was trying to remove a rock from a ditch. While prying out the rock the. . . tooth was hooked in the rock. . . The rock broke loose and the middle right tooth struck the rock and broke.” (Docket No. 47-2 at 1).

B. *The Missing Tooth and Excavator*

Unfortunately, the spike tooth and Excavator were not located during fact discovery and were reportedly not available for the parties’ experts to study. Plaintiff relayed that he was told by someone who worked for Welded and visited him at the hospital that Welded was sending the tooth out for a metallurgic test. (*Grasinger Depo.* at 65-66). He tried a few times to follow-up and was unsuccessful. (*Id.*). The record also reveals that Plaintiff’s counsel made some efforts to locate this equipment, including contacting Welded in October of 2017 and Zurich Insurance Company (“Zurich”), the worker’s compensation carrier handling the claim on behalf of Welded, in October and November of 2017 and January of 2018. (Docket Nos. 47 at 6; 47-3; 63-3 at 7-8). Welded subsequently filed for bankruptcy in the U.S. Bankruptcy Court for the District of Delaware on October 22, 2018 and efforts to locate the spike tooth through bankruptcy counsel were unsuccessful. (Docket No. 58 at 10-11). The parties likewise did not take steps to discover

¹ At the hearing, counsel reported that Tyson had not been located and was not deposed during fact discovery. (Docket No. 58 at 11). It is well established that “[t]his Court may properly take judicial notice of docket entries, documents, and opinions filed in other cases,” *Johnson v. Allegheny Cnty.*, No. 2:14-CV-857, 2014 WL 5513769, at *2 n.2 (W.D. Pa. Oct. 31, 2014). As such, the Court takes judicial notice of a Notice of Deposition filed on January 3, 2022 in the United States District Court for the Northern District of West Virginia in *Deblasio v. Welded Construction, L.P., et al.*, Case No. 5:20-cv-00226-JPB, which referenced that a videoconference deposition of Tyson was to take place on January 21, 2022. That Notice was served on counsel for Welded, Phillip Sbrolla, Esq. and Matthew C. Schrebe, Esq. of Post & Schnell in Pittsburgh and Cy A. Hill, Jr., Esq. and Ashley W. French, Esq. of Cipriani & Werner, P.C. in Charleston, WV. It is unclear from the docket if Tyson’s deposition took place because the *Deblasio* case settled, but it appears that Tyson may have been located by counsel in that matter.

the location of this equipment while this case was pending in the Court of Common Pleas of Allegheny County between Plaintiff's filing of a Praecipe for Writ of Summons which was served on Defendant on August 17, 2018 and the lawsuit's removal to this Court in July of 2021.² (Docket No. 1 at ¶¶ 1-2).

With respect to the spike tooth, Defendant's initial disclosures included a Cleveland Brothers Incident Report that it received through the Dealer Solutions Network ("DSN"), which included two photographs of the broken spike tooth which have been used by the experts in this case. (Docket Nos. 53-5 at 12; 62-3; 63-3 at 17; 63-6 at 3). Of note, both photographs are stamped "PROPERTY OF CATERPILLAR, INC." (*Id.*).³



Information about the manufacturing of the spike tooth (referred to as the "Spike Tip") was provided in Caterpillar's Responses to Plaintiff's Interrogatories and Requests for Production:

...based on the markings shown in the two photographs of the Spike Tip at issue, that Spike Tip was originally designed and developed by Esco Corporation, with Caterpillar initially sourcing the Spike Tips solely from Esco. Caterpillar further

² The Court notes that the Pennsylvania Rules of Civil Procedure allow for a party to conduct pre-complaint discovery after a Praecipe for Writ of Summons is filed in the Court of Common Pleas. *See, Pa.R.C.P. No. 4003.8(a)* ("A plaintiff may obtain pre-complaint discovery where the information sought is material and necessary to the filing of the complaint and the discovery will not cause unreasonable annoyance, embarrassment, oppression, burden or expense to any person or party."); *see also Gross v. Stryker Corp.*, 858 F. Supp. 2d 466, 504 (W.D. Pa. 2012) ("Plaintiff also had an opportunity to conduct pre-complaint discovery when he commenced this action in the Court of Common Pleas of Allegheny County by filing a Praecipe for Writ of Summons.").

³ The parties have not presented evidence explaining who took the photographs or where they were taken. Interestingly, the photograph on the right appears to contain a legal document which references an intolerance to "discrimination. . . by anyone, including. . . supervisors. . ." and a box on the floor showing an image of a crockpot.

states it began licensing the design for the Spike Tip bearing P/N 470-7972 from Esco in or around 2012. The geometry of the design did not change as part of that arrangement. The metallurgical properties of the Spike Tip were subsequently updated to be consistent with Caterpillar's standards. After Caterpillar licensed the design from Esco in 2012, all Spike Tips bearing P/N 470-7972 have been manufactured, tested and supplied to Caterpillar by either Sungbo Industrial, Ltd. in South Korea or Castmetal Xuzhou Co., Ltd. in China. Upon information and belief based on the markings shown in the two photographs of the Spike Tip at issue, Caterpillar believes the Spike Tip depicted in the two photographs was manufactured, tested and supplied by Sungbo.⁴ Caterpillar further refers to the attached engineering drawings and specifications: 470-7972-00 Tip Spike; 390-5771-01 Tip Pocket; 1E0106-15 Heat Treatment-Direct Hardening; 1E0703-08 Steel Casting; and 1E1540- 01 Cast Material.

(Docket No. 53-1 at 2).

Further information about the broken spike tooth was provided by Caterpillar's corporate representative, David Hawbaker ("Hawbaker").⁵ (Docket Nos. 53-5; 59-5; 58 at 16, 32). Hawbaker holds a master's degree in materials engineering from the Colorado School of Mines in Golden, Colorado. (Docket No. 53-5 at 3). He manages Caterpillar's Ground Engaging Tools (GET) portfolio, focusing on Caterpillar supplier development, product quality, and product support. (*Id.* at 4). Hawbaker testified that "[b]reakage does happen with . . . components," such as Caterpillar's spike teeth, and that Caterpillar does not have minimum tensile strength or ductility requirements for its spike teeth for reasons that remain unknown to him. (Docket No. 53-1 at 2-4; 53-5 at 11). Caterpillar's specifications include the spike teeth's weight, dimensions, heat treatment steps to form the desired microstructure, the required hardness values, the required composition, ideal diameter (hardenability), and Charpy V-notch specifications. (Docket No. 53-1). The Charpy V-notch value is a type of measurement to determine an object's "toughness."

⁴ The record does not reveal any attempt to join Esco Corporation and Sungbo Industrial, Ltd, nor discovery directed to them.

⁵ It is well settled that a Rule 30(b)(6) designee, such as Mr. Hawbaker, "is not simply testifying about matters within his or her personal knowledge, but rather is speaking for the corporation." *Robinson v. Countrywide Home Loans, Inc.*, No. CIV.A. 08-1563, 2010 WL 4225884, at *1 (W.D. Pa. Oct. 21, 2010) (quoting *State Farm Mut. Auto. Ins. Co. v. New Horizont, Inc.*, 250 F.R.D. 203, 216 (E.D. Pa. 2008)).

(Docket No. 53-4 at 30). “Toughness is a material property that indicates the ease or difficulty with which a crack can propagate through the material. So a tough material is not easily cracked. And the opposite of a tough material is a brittle material, which is easily cracked.” (*Id.* at 23). Based upon his review of the broken tooth photographs, he finds that there “is a fairly clean, uniform, dull, metallic surface that suggests more of a ductile failure.” (Docket No. 53-5 at 15).

As to the missing Excavator, in response to the Court’s questioning at the oral argument, defense counsel stated that to his knowledge the Excavator had not been found. (*Id.* at 10).⁶ Yet, Defendant produced a SIMS Sales and Service Detail report which contains a chart showing all service conducted on the Excavator between August 28, 2015 and June 14, 2021. (Docket Nos. 63-6 at 3; 62-3). The SIMS Sales and Service Detail report does not show any service by Cleveland Brothers and there are no service reports between February 17, 2017 and August 3, 2018 such that no service of the Excavator was documented around the time of the incident involving Plaintiff. (Docket No. 62-8).

C. Plaintiff’s Experts’ Opinions

Plaintiff obtained expert opinions from Drs. David Pope (“Pope”) and Mark Licurse (“Licurse”) to support his claims and address “why the subject [spike] tooth broke and injured”

⁶ Previously, Defendant acknowledged that the dealers who sold/leased/repaired/maintained this Excavator “may include Cleveland Brothers, Ohio CAT and/or Altorfer, Inc.” but it had not determined the current location of the machine. (Docket No. 63-6 at 2). Again, this Court takes judicial notice that Ohio CAT, Cleveland Brothers and Caterpillar Financial Services were all listed among Welded Construction, L.P.’s largest 30 creditors in its Voluntary Petition for Chapter 11 Bankruptcy filed on October 22, 2018 in the Bankruptcy Court for the District of Delaware at Case No. 18-12378-LSS. *See In re: Welded Construction, L.P.*, Docket No. 1 (Bankr. Del. Oct. 22, 2018); *see Johnson 2014 WL 5513769, at *2 n.2*. In addition, an Order issued by the Bankruptcy Court on November 21, 2019 authorized Welded to reject a number of its equipment leases with Ohio CAT, with the attached schedule including a WR01523 CAT 336FL Excavator with serial number RKB01523. *See In re: Welded Construction, L.P.*, Docket No. 1119 (Bankr. Del. Nov. 21, 2019). Hence, it appears that Welded had a lease with Ohio CAT for the Excavator for a period of time, although it is unclear if Ohio CAT or some other entity held the lease at the time of Grasinger’s accident. The record does not reveal any discovery directed to Ohio CAT.

him. (*See* Docket No. 53-1, Pl. Ex. 1, “Pope & Licurse Report” at 1).⁷ Pope received his M.S., and Ph.D. in Materials Science from the California Institute of Technology in Pasadena, California in 1962 and 1967, respectively, and received his B.Sc. in Engineering Science from the University of Wisconsin in 1961. (Docket No. 48). His research interests include deformation and fracture of intermetallic compounds; crystal growth; high temperature fracture; strength of metal-ceramic interfaces; and ductile to brittle transitions. (*Id.*). He is currently a Professor Emeritus in the Department of Materials Science and Engineering at the University of Pennsylvania and has authored or coauthored approximately 200 publications in his area of expertise. (*Id.*). Licurse received his B.S.E. and Ph.D. in Materials Science and Engineering from the University of Pennsylvania in 2006 and 2013, respectively. (Docket No. 49). He holds various positions at the University of Pennsylvania, including lecturer in undergraduate and graduate engineering courses. (*Id.*). He has authored or co-authored four (4) publications, and is a member of several professional organizations, including the American Society for Metals International; The Minerals, Metals and Materials Society; and The American Society of Mechanical Engineers. (*Id.*).

Plaintiffs’ proffer of expert testimony includes Pope and Licurse’s expert report; Pope’s deposition testimony; and their affidavits. The Court briefly summarizes the relevant portions of each, in turn.

1. Expert Report

Pope and Licurse drafted a report dated July 20, 2022, articulating their joint opinion on the Grasinger incident. (*See Pope & Licurse Report* at 1). They personally reviewed and relied upon the following: the photos of the subject tooth; the Complaint; deposition testimony of

⁷ The Court notes that it cites to the “Pope & Licurse Report” for convenience because it is filed in several different locations on the docket and marked as both Plaintiff Ex. 1 and Defendant Ex. C. (*See* Docket Nos. 45-1 at 27-31; 52-1 at 5-9; 53-1 at 1-10; 54-3 at 1-10; 62-5 at 1-10; 63-7 at 1-10).

Grasinger and Hawbaker; Caterpillar product specifications for the spike teeth; the OSHA Report; and Caterpillar's Responses to Plaintiff's Interrogatories and Requests for Production and accompanying documentation. (*Id.* at 3).

In their report, Pope and Licurse write that the reviewed photos of the fractured tooth show:

a fracture which originates at the top surface and then propagates toward the bottom. The photos clearly show the fracture surface contains no signs of a progressive failure, instead, it failed suddenly. It is also clear that the fracture is brittle and terminates at the bottom surface with the formation of a cantilever curl, consistent with a bending failure.

(*Pope & Licurse Report* at 1-2). Reviewing the specifications, they note they "do not state a minimum tensile strength or ductility," which Caterpillar representative Hawbaker acknowledged when he was deposed. (*Id.* at 2-3). And, they point to Hawbaker's belief that a ductile fracture occurred. (*Id.*). Likewise, they find that the subject tooth lacked ductility, representing a product defect, "which caused the tooth to break and become a dangerous projectile." (*Id.* at 4). They also note Hawbaker's testimony that breakage does happen. (*Id.* at 4).

Pope and Licurse conclude their Report with the following nine (9) opinions they have reached to a reasonable degree of engineering certainty:

1. The subject tooth fractured because of an impact load on the tooth.
2. The tooth failed without visible plastic deformation, and the fracture was therefore relatively brittle.
3. The tooth has a specified impact resistance that is on the brittle end of the spectrum, and therefore the appearance of the fracture surface is consistent with the material specifications.
4. Due to the relative brittleness of the tooth, the bending energy in the tooth was then converted into kinetic energy after fracture, causing the broken tooth to fly into the cab. The condition of the tooth in this respect represents a product defect, as noted above.

5. According to the testimony of the Caterpillar designee, fractures of these teeth are not unusual.
6. The fracture of this tooth is a typical, low ductility, low toughness failure as expected by the low CVN energy specified for this tooth.
7. Given the low toughness of these teeth, they will commonly become projectiles after they fracture upon impact.
8. The machine operator is only protected by the relatively low probability that the broken tooth will fly into the cab.
9. In order to protect the operator, the teeth should have a higher toughness that will prevent their becoming projectiles after fracture.

(*Id.* at 4-5).

2. Pope's Deposition

While both Pope and Licurse were made available for depositions, Caterpillar elected to only depose Pope and took his deposition on January 25, 2022. (*See* Pl. Ex. 4, Docket No. 53-4, "Pope Depo." at 1). In his deposition, Pope explained that where the fractured subject is available, engineers may engage in several types of examinations to determine the cause of a fracture. (*Pope Depo.* at 24-35). The first type is the macroscopic examination, which entails looking at the fractured piece with the naked eye, or with a loupe, and then taking photographs of the subject in order to understand how the fractured piece fits into the object from which it broke and the nature of the failure. (*Id.* at 25-26). The second type is the microscopic evaluation, which is conducted through the use of an optical microscope and allows the examiner to see the detailed nature of the fracture process, such as where the failure began and ended. (*Id.* at 26-27). In Pope's experience, around fifty percent of examinations will include a microscopic review. (*Id.* at 29-30). Additionally, an examiner may utilize an electron microscope during the microscopic examination, allowing him to conduct a chemical analysis of the object. (*Id.* at 28-29). Other studies that may

take place include a hardness test, the Charpy V-notch impact test, and, less commonly, a chemical test.⁸ (*Id.* at 37-38, 51-52). Despite the many tests which may be utilized, Pope finds that “as a general matter, one can tell from the macroscopic examination the general nature of the failure.” (*Id.* at 27-28).

Pope testified that he and Licurse were able to determine how the spike tooth broke without physical testing. (*Pope Depo* at 47-48 (“But was [testing] it necessary? Well, not necessarily so.”). He explained that multiple tests and measurements are typically conducted because an investigation into a product failure is a participatory process involving several individuals and each of them typically want the information presented in a different manner. (*Pope Depo* at 57-58). He acknowledged that photographs of a product can only provide some of the information that physical testing would reveal but that he was able to infer other information from the photographs, including whether the fracture was ductile or brittle. (*Id.* at 40-41, 57-59). However, his opinions are supported by the observations he made. (*Id.* at 142). To that end, he was able to determine from the photographs that the broken spike tooth sustained a brittle fracture and that there was no evidence of a progressive failure. (*Id.* at 67-69).

According to Pope, material falls onto a spectrum between “ductile” and “brittle.” He stated that “[a] brittle material is one that will not macroscopically deform very much before it breaks” and “does not undergo substantial deformation or a substantial [...] volume of that part does not plastically deform as a crack propagates through it.” (*Pope Depo* at 108-109). On the other hand, ductile means a material will undergo deformation before the fracture. (*Id.* at 71). For

⁸ The Charpy impact test, also known as the Charpy V-notch test, is a test that involves striking a sample from a given material with a calibrated hammer. The impact test measures the Charpy V-notch value. (Docket No. 53-4 at 13).

example, glass is considered brittle because glass breaks immediately on impact, but a more ductile material will bend and deform prior to breaking. (*Id.* at 70-72, 74-75).

Pope emphasized that his opinion is only as to the material of the spike tooth and not its physical design. (*Pope Depo* at 120). He did not offer an alternative design for the physical tooth itself nor its material composition. (*Id.*). He further clarified that the comment on page 4 of the Report indicating that “Caterpillar’s failure to compensate for the lack of ductility with proper safety features and precautions constitutes a design defect with respect to the teeth at issue” was not offering a design defect opinion regarding the spike tooth but was offering an opinion on the design of the Excavator’s safety features. (*Id.* at 121-123). With that said, he conceded that it would be “very difficult” to prevent the broken tooth from entering the cab if it became a projectile because the Excavator cab already contains fracture-resistant transparent material, that he did not have an alternative design, and that he did not do any research about the Excavator itself. (*Id.*).

3. Experts’ Affidavits

In addition, Pope and Licurse provided affidavits dated January 11, 2023 in which they aver to all of the following: their educational background; that they worked together to develop the joint expert report; the methodologies they employed are customary in their field of materials science; and they came to their opinions within a reasonable degree of engineering certainty without conducting any physical testing of the spike tooth at issue. (Docket Nos. 53-2 at ¶¶ 2-6; 53-9 at ¶¶ 2-6). Pope and Licurse further note that they used the *ASM Handbook, Volume 11, Failure and Analysis Prevention* (2002), specifically, “Table 1: Damage Mode Identification Chart,” to analyze the photographs of the broken spike tooth. (Docket Nos. 53-2 at ¶ 7; 53-9 at ¶ 7). Ultimately, they were able to reach the following opinions:

- The Spike Tip Tooth at issue shows very little irreversible (plastic) deformation which indicated [...] that the fractured material was overly brittle.
- Overall, the fracture surface is flat, including near the edges of the fracture. There are no shear lips present, which would indicate a less brittle fracture (note shear lips commonly are found near the edges of a fracture surface creating a slanted feature in more ductile materials).
- The presence of radial lines and chevrons on the fracture surface is consistent with a fast fracture of a material with limited macroscale ductility.
- There is a cantilever/compression curl on the surface, which represents a deviation from an overall flat fracture as the crack approaches the compression side of the failure and is commonly seen in brittle materials under high strain rates.

(Docket Nos. 53-2 at ¶ 8; 53-9 at ¶ 8).

4. ASM Damage Mode Identification Chart

The ASM Damage Mode Identification Chart upon which Pope and Licurse relied was admitted into evidence at the hearing. (Pl. Ex. 2A, Docket No. 55-2). According to this chart, a visual inspection of a fracture that reveals little to no distortion; flat surfaces; an appearance of bright or coarse texture, a crystalline surface, or a grainy surface; and rays or chevrons pointing to the origin, all indicate a break based on “brittle overload.” (Docket No. 55-2A). In contrast, an examination of a fracture surface that reveals “necking” or distortion in the direction consistent with the applied loads; a dull, fibrous fracture; and shear lips all indicate a break based on “ductile overload.” (*Id.*).

D. Defendant's Rebuttal

Defendant proffers a rebuttal report written by Dr. Thomas Easley ("Easley"), a fellow expert in materials science.⁹ (Docket No. 54-5). Easley received his Ph.D. in Materials Science & Engineering from Northwestern University in 2000, and his Bachelor of Materials Science & Engineering from Cornell University in 1991. (*Id.* at 21-23). He is employed as a Materials Analyst for SEA, Ltd., and has multiple publications in his area of expertise, several presentations primarily in diamond composites, and holds a number of patents. (*Id.*).

Easley opines that while some indication of the microscopic failure modes can be determined through "a visual inspection of a fracture surface . . . their definitive determination requires the use of optical and electron microscopes." (*Id.* at 6). Because the "presence of a macroscopically brittle fracture. . . does not necessarily imply that the fracture occurred due to low toughness," a full metallurgical analysis is needed to come to a more accurate conclusion. (*Id.* at 13-14). Easley also suggests that Pope and Licurse's report is flawed because they base their opinion on an assumed CVN value for the defective spike tooth. (*Id.* at 15-17). Easley admits that Pope and Licurse knew Caterpillar's minimum CVN value requirements for spike teeth of that kind. (*Id.* at 16). However, he opines that the CVN value for this particular spike tooth could have been higher, and Pope and Licurse are therefore unable to properly conclude that the spike tooth was defective. (*Id.* at 15-18).

III. RELEVANT PROCEDURAL BACKGROUND

Defendant filed its *Daubert* Motion, brief and supporting evidence on November 22, 2022. (Docket Nos. 45; 46). Plaintiff responded with his opposing brief, evidence and the experts' curricula vitae on December 21 and 22, 2022. (Docket Nos. 47; 48; 49). Defendant submitted its

⁹ The parties have not disputed Easley's qualifications nor his ability to provide a rebuttal expert opinion at this stage. Plaintiff also declined to depose him during expert discovery. (Docket No. 58 at 4).

reply on January 6, 2023, and Plaintiff filed his sur-reply on January 12, 2023 which included the affidavits of Pope and Licurse. (Docket Nos. 51; 52).

A *Daubert* hearing was held on January 24, 2023, and the official transcript of the proceeding was filed on February 21, 2023. (Docket Nos. 55; 58). Following the hearing, the Court directed the parties to submit briefing on Defendant's objection to the Court's consideration of the affidavits of Pope and Licurse and to also provide proposed findings of fact and conclusions of law. (Docket No. 57). On March 3, 2023, Defendant filed its Motion to Strike the Affidavits of David Pope and Mark Licurse pursuant to [Federal Rule of Civil Procedure 26\(a\)\(2\)\(B\)](#), Plaintiff responded in opposition on March 10, 2023, and this Court denied Defendant's Motion in a Memorandum Order dated March 21, 2023. (Docket No. 59; 60; 61). Defendant submitted its proposed findings of fact and conclusions of law on April 13, 2023, and Plaintiff filed his proposed findings of fact and conclusions of law on April 27, 2023.¹⁰ (Docket Nos. 62; 63). Accordingly, as the briefing has concluded and all evidentiary submissions have been made, the instant Motion is ripe for disposition.

IV. LEGAL STANDARD

Federal Rule of Evidence 702 provides the basic framework for the admissibility of expert testimony:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
 - (b) the testimony is based on sufficient facts or data;
 - (c) the testimony is the product of reliable principles and methods;
- and

¹⁰ In the interim, the parties declined an invitation from the Court to participate in a judicial settlement conference or return to mediation.

(d) the expert has reliably applied the principles and methods to the facts of the case.

FED. R. EVID. 702. The Advisory Committee’s official note to the Rule elaborates that “the rejection of expert testimony is the exception rather than the rule.” FED. R. EVID. 702. *See also Trask v. Olin Corp.*, No. CV 12-340, 2016 WL 1181428, at *7 (W.D. Pa. Mar. 28, 2016) (citing *Kannankeril v. Terminix Intern., Inc.*, 128 F.3d 802, 806 (3d Cir. 1997) (writing that, “Rule 702. . . has a liberal policy of admissibility.”).

The United States Court of Appeals for the Third Circuit has held that “Rule 702 embodies a trilogy of restrictions on expert testimony: qualification, reliability, and fit.” *Schneider ex rel. Est. of Schneider v. Fried*, 320 F.3d 396, 404 (3d Cir. 2003). The district court acts as a gatekeeper to ensure that all expert opinions meet these three requirements, but the Court need not determine that the expert's assessment is correct. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 589-590 (1993). Indeed, trial courts need not determine which scientific theory is best or should be applied, but rather, must only determine whether the expert's conclusion has been arrived at in a scientifically sound and methodologically reliable manner. *U.S. v. Mitchell*, 365 F.3d 215, 244 (3d Cir. 2004) (quoting *Ruiz–Troche v. Pepsi Cola of Puerto Rico Bottling Co.*, 161 F.3d 77, 85 (1st Cir. 1998)) (citations omitted); *see also Kannankeril*, 128 F.3d at 809 (“The trial judge must be careful not to mistake credibility questions for admissibility questions.”). As long as an expert’s testimony rests upon “good grounds, based on what is known,” it should be tried by the adversary process (that is, through competing expert testimony, active cross-examination, and the like). *Daubert*, 509 U.S. at 590.

V. DISCUSSION

Defendant maintains that Plaintiff has failed to meet his burden to demonstrate that the proffered opinions are sufficiently reliable or fit the case and asks that the Court exclude them

from consideration by the jury at trial. (Docket Nos. 45; 46; 51; 62). Plaintiff counters that his experts are well-qualified and have employed a reliable methodology to reach relevant conclusions about the cause of the spike tooth's failure such that their opinions should be admitted. (Docket Nos. 47; 52; 63). Having fully considered the parties' arguments as to the admissibility of the opinions of Plaintiff's proffered experts, the Court finds that, generally, their opinions are admissible under Rule 702 and that Caterpillar's challenges are best reserved for cross-examination at trial. *See Daubert*, 509 U.S. at 596. However, for reasons more fully explained below, the Court will preclude Plaintiff's proffered experts from testifying that the Excavator cab was defectively designed. (*See* Docket No. 53-4 at 31). The Court now turns to its evaluation of the parties' arguments, starting with the experts' qualifications.

A. *Qualifications*

Initially, Defendant does not contest that Pope and Licurse are sufficiently qualified to testify as experts in materials science. (Docket Nos. 46; 51; 62). Despite this lack of objection, the Court addresses Plaintiff's experts' qualifications as part of the analysis as to reliability and fit, which are challenged. It is well established that "a broad range of knowledge, skills, and training," are to be considered by the Court when determining whether an expert is qualified. *In re Paoli R.R. Yard PCB Litig.*, 35 F.3d 717, 741 (3d Cir. 1994). Here, the Court agrees with the parties that the record demonstrates that Pope and Licurse possess the requisite knowledge, skills, and training to provide expert opinions in this case. *See id.* As the record reflects, both are well-schooled metallurgists, educators at an Ivy League university, and authors of numerous materials science publications. (Docket Nos. 48-49). They have also been accepted as experts in materials science by district courts in several instances. *See Kuhar v. Petzl Co.*, No. 16-395, 2019 U.S. Dist. LEXIS 155834, at *9 (D.N.J. Sep. 12, 2019) (accepting Pope and Licurse as qualified to testify as

experts in materials science); *see also In re Fluidmaster, Inc., Water Connector Components Prods. Liab. Litig.*, No. 14-cv-5696, 2017 U.S. Dist. LEXIS 48792, at *81 (N.D. Ill. Mar. 31, 2017) (accepting Pope as qualified to testify as an expert in materials sciences); *Revak v. Interforest Terminal UMEA AB*, No. 03-4822, 2009 U.S. Dist. LEXIS 83462, at *3 (E.D. Pa. Sep. 9, 2009) (same). As such, this Court finds that Plaintiff has demonstrated by a preponderance of the evidence that Pope and Licurse are qualified to offer expert opinions in the field of materials science and turns to the Defendant's arguments to preclude them.

B. Reliability

Defendant argues that Plaintiff's experts should be excluded because they failed to use reliable methods to reach their opinions. (Docket No. 46 at 2). Plaintiff counters that Pope and Licurse's opinions should be admitted because they utilized methodology based on their significant experience and numerous scientific and technical grounds. (Docket No. 47 at 10). For the following reasons, the Court holds that these experts have employed sufficiently reliable methods in reaching their conclusions in this case, consistent with Rule 702.

The United States Court of Appeals for the Third Circuit has instructed that an expert's opinion is reliable so long as his process is based on "good grounds," *In re Paoli*, 35 F.3d at 744, i.e., it is "based on the methods and procedures of science rather than on a subjective belief or unsupported speculation." *Furlan v. Schindler Elevator Corp.*, 516 F. App'x 201, 205 (3d Cir. 2013) (internal citation and quotation omitted). As such, this Court must make "a determination as to [the] scientific validity," of the processes or techniques utilized by an expert. *In re Paoli*, 35 F.3d at 742. The following factors weigh in this analysis:

- (1) whether a method consists of a testable hypothesis;
- (2) whether the method has been subject to peer review;
- (3) the known or potential rate of error;

- (4) the existence and maintenance standards controlling the technique's operation;
- (5) whether the method is generally accepted;
- (6) the relationship of the technique to methods which have been established to be reliable;
- (7) the qualifications of the expert witness testifying based on the methodology; and
- (8) the non-judicial uses to which the method has been put.

In re Paoli, 35 F.3d at 743 n.8. But, this list of factors is “neither exhaustive nor applicable in every case.” *Kannankeril*, 128 F.3d at 806-07.

“[T]he inquiry as to whether a particular scientific technique or method is reliable is a flexible one.” *In re Paoli*, 35 F.3d at 742. “[T]he law grants a district court the same broad latitude when it decides *how* to determine reliability as it enjoys in respect to its ultimate reliability determination.” *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 142 (1999) (emphasis in original). “*Daubert* neither requires nor empowers trial courts to determine which of several competing scientific theories has the best provenance.” *Ruiz-Troche*, 161 F.3d at 85. An expert may “draw a conclusion from a set of observations based on extensive and specialized experience,” and still provide an opinion based on “good grounds.” *Kumho*, 526 U.S. at 156. “[I]n cases involving technical subjects like engineering, trial courts may consider relevant literature, evidence of industry practice, product design and accident history in evaluating reliability.” *Meadows v. Anchor Longwall & Rebuild, Inc.*, 306 F. App’x 781, 788 (3d Cir. 2009) (citing *Milanowicz v. The Raymond Corp.*, 148 F. Supp. 2d 525, 536 (D.N.J. 2001)). Relevant here, the Court of Appeals has recognized that “metallurgy and materials failure analysis are old, well-established sciences.” *Fillebrown v. Steelcase, Inc.*, 63 F. App’x 54, 56 (3d Cir. 2003).

The Court finds that Pope and Licurse utilized a methodology accepted in their field of materials science in reaching their opinions as to why the spike tooth failed in this case. In this regard, they conducted a macroscopic evaluation of the available photographs of the spike tooth;

identified significant, visual markers (i.e., the flat surface at the point of breakage and the formation of a cantilever curl); and interpreted their observations based on the *ASM Handbook*. (See e.g., *Pope & Licurse Report*; *Pope Depo.*; Docket Nos. 53-2; 53-9). Although they did not conduct physical testing on the spike tooth given its unavailability, they determined that physical testing was not necessary, because “as a general matter, one can tell from the macroscopic examination the general nature of the failure.” (*Pope Depo* at 27-29; 47-48 (“But was [testing] it necessary? Well, not necessarily so.”)). Pope and Licurse’s conclusions are likewise grounded in their extensive training in the field of materials science and prior experience in conducting materials failure analyses. See *Knecht v. JAKKS Pacific, Inc.*, No. 4:17-CV-2267, 2021 WL 3722854, at *5 (M.D. Pa. Aug. 23, 2021) (finding Pope’s qualifications supported the reliability of his testimony). All told, Pope and Licurse analyzed their observations of the spike tooth in light of the circumstances of the incident; the product’s specifications, including the absence of minimum tensile strength and ductility requirements; and history of breakage. See *Trask*, 2016 WL 1181428 at *11 (citing *Meadows v. Anchor Longwall & Rebuild, Inc.*, 306 F. App’x 781, 788 (3d Cir. 2009) (“in cases involving technical subjects like engineering, trial courts may consider relevant literature, evidence of industry practice, product design and accident history in evaluating reliability.”)). Given that Pope and Licurse employed a common method of analysis and utilized facts in the record to come to their conclusions, the Court finds that their opinions are based on good grounds. *In re Paoli*, 35 F.3d at 743 n.8.

The Court acknowledges that Defendant contends that this type of methodology can neither be tested nor replicated. (Docket Nos. 46; 51; 62). Yet, having a “testable hypothesis” is only one of the many inquiries that *Paoli* poses, and not every *Paoli* factor needs to be satisfied for an expert’s methodology to be based on good grounds. *Kannankeril*, 128 F.3d at 806-07. With that

said, both Defendant’s rebuttal expert and its corporate representative reviewed the photographs of the spike tooth and provided their own opinions based on observations of same. (Docket Nos. 45-1; 53-5 at 15). To the extent that Defendant argues, and its own expert opines, that physical testing would have provided more accurate conclusions, (Docket Nos. 46; 51; 53-1; 53-9), this concern is not sufficient to justify the exclusion of Plaintiff’s proffered expert testimony. *See, Dalton v. McCourt Elec. LLC*, 112 F. Supp. 3d 320, 329 (E.D. Pa. 2015) (finding that an expert who did not perform any testing or experiments offered an opinion that was nonetheless reliable and fit the case). Rather, the competing expert opinions are best addressed through the adversarial process. *See, Daubert* 509 U.S. at 596 (writing that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”); *Trask*, 2016 WL 1181428 at *11 (writing, “there are no bright-line rules requiring that an expert undertake a specific type of testing in a particular case.”). Accordingly, the Court holds that Plaintiff has shown by a preponderance of the evidence that his experts used sufficiently reliable methods to support their opinions.

C. *Fit*

Defendant next maintains that Plaintiff’s expert opinions do not “fit” the case because their conclusions will not assist the trier of fact; are based on assumptions rather than the record; and concern the broken spike tooth that could not be fully examined because it is missing. (Docket No. 46 at 4, 11-12). Plaintiff counters that his experts’ opinions satisfy the “fit” element because the testimony would assist the trier of fact in determining whether the spike tooth was defective. (Docket No. 47 at 12). The Court generally agrees with Plaintiff but will limit his experts’ testimony, as noted below, precluding them from testifying as to the Excavator’s safety features and precautions.

The fit prong “depends ... on the proffered connection between the scientific research or test result ... and [the] particular disputed factual issues.” *Nelson v. Am. Honda Motor Co.*, No. 1:18-CV-210, 2022 WL 3599726, at *3 (W.D. Pa. Aug. 23, 2022) (citing *Paoli*, 35 F.3d at 743). The “fit” element “goes primarily to relevance.” *Daubert*, 509 U.S. at 591. “[T]he expert’s testimony must be relevant for the purposes of the case and must assist the trier of fact.” *Schneider*, 320 F.3d at 404. For testimony to be relevant, there must be “a valid scientific connection to the pertinent inquiry as a precondition to admissibility,” *Daubert*, 509 U.S. at 591–92, i.e., the expert must, “apply his experience reliably to the facts; his opinions must be well-reasoned, grounded in his experience, and not speculative.” *Fed. Trade Comm’n v. Innovative Designs, Inc.*, No. 2:16-CV-01669-NBF, 2020 WL 758727, at *14 (W.D. Pa. Feb. 14, 2020) (citing, *Sargent v. Cmmw. of Pa.*, No. 13-00730, 2015 WL 6447742, at *1 (M.D. Pa. Oct. 26, 2015)). The Court notes that the standard for analyzing fit is “not that high.” *Premier Comp Sols. LLC v. UPMC*, Civ. A. No. 15-703, 2019 WL 480480, at *3 (W.D. Pa. Feb. 7, 2019) (citing *Paoli*, 35 F.3d at 745).

Defendant’s motion and initial briefing did not analyze the relevance of the Plaintiff’s expert testimony as to all of the causes of action asserted by him, i.e., negligence, strict liability, and breach of warranty under Pennsylvania law. (Docket Nos. 45; 46; 51). Rather, Defendant focused its “fit” arguments on whether Plaintiff’s experts’ opinions support his manufacturing or design defect product liability theories. (*Id.*). Plaintiff countered in his Response that the expert testimony supports his strict liability claims under Section 402A of the Restatement of Torts (Second). (Docket No. 47 at 4); see, *Tincher v. Omega Flex, Inc.*, 628 Pa. 296, 415, 104 A.3d 328, 399 (Pa. 2014) (writing that “Pennsylvania remains a Second Restatement jurisdiction.”). In its post-hearing proposed findings of fact and conclusions of law, Defendant argues for the first time that the proffered expert opinions do not “fit” any of the asserted legal theories. (Docket No. 62).

The Court declines to address these new arguments as it has repeatedly held that “legal arguments not raised and relief that is not sought in the initial motion are generally deemed waived,” and “[a]lthough this Court often holds oral argument and liberally permits supplemental briefing, these procedures [shall] not be construed as the Court granting permission to raise for the first-time new issues or arguments at the hearing and through supplemental submissions.” *Vay v. Huston*, Civ. A. No. 14-769, 2016 WL 1408116, at *9 (W.D. Pa. Apr. 11, 2016) (citation omitted). The Court also concludes that the proffered opinions are relevant to the strict liability claims such that Plaintiff’s experts will be permitted to testify at trial, with limitations as to the Excavator’s safety features. The Court’s rationale follows, starting with the applicable precedent.

To recover under Pennsylvania law pursuant to a strict products liability theory, a plaintiff generally must prove that (1) the product was defective; (2) the defect was the proximate cause of the plaintiff’s injuries; and (3) the defect existed at the time it left the manufacturer’s control. Restatement (Second) of Torts § 402A(1)(b). See *Barnish v. KWI Building Co.*, 980 A.2d 535, 541 (Pa. 2009); *Chandler v. L’Oreal USA, Inc.*, 340 F. Supp. 3d 551, 564 (W.D. Pa. 2018), *aff’d*, 774 F. App’x 752 (3d Cir. 2019). “A defective condition may be established by proving either a manufacturing defect, a design defect, or a failure-to-warn defect.” *Smith v. Howmedica Osteonics Corp.*, 251 F. Supp. 3d 844, 847 (E.D. Pa. 2017). As noted, Plaintiff alleges that Caterpillar’s products were defectively designed and/or manufactured.¹¹ (Docket No. 1-5). Plaintiff’s experts reference a “product defect” as the cause of the tooth’s failure. (*Pope & Licurse Report* at 1, 4-5). Such defect could relate to a design or manufacturing defect.¹² The Court reviews each of these, in turn.

¹¹ In his Complaint, Plaintiff also alleges a failure-to-warn defect, but during the *Daubert* hearing, Plaintiff’s counsel stated that Pope and Licurse do not offer any opinions on the warnings. (Docket No. 58 at 51). Therefore, the Court will not address any failure-to-warn theory.

¹² It is not clear at this stage exactly what theories Plaintiff intends to pursue.

1. Design Defect

“A design defect is one where the manufacturer constructs a product in conformity with an intended design but the design itself is ‘unreasonably dangerous’ to the consumer.” *McPeak v. Direct Outdoor Prod., LLC*, No. 19-CV-03719-JMY, 2022 WL 4369966, at *3 (E.D. Pa. Sept. 20, 2022) (citing *Tincher*, 104 A.3d at 328). Under a design defect theory, a plaintiff “may prove defective condition by showing either that (1) the danger is unknowable and unacceptable to the average or ordinary consumer,” (the “consumer expectation standard”), “or that (2) a reasonable person would conclude that the probability and seriousness of harm caused by the product outweigh the burden or costs of taking precautions,” (the “risk-utility standard”). *Cohen v. Johnson & Johnson*, No. 2:20-CV-00057, 2022 WL 5109167, at *9 (W.D. Pa. Oct. 5, 2022) (citing, *Tincher*, 104 A.3d at 347-348).

Under the consumer expectation standard, the jury should consider, “[t]he nature of the product, the identity of the user, the product's intended use and intended user, and any express or implied representations by a manufacturer.” *Tincher*, 104 A.3d at 387. Under the risk-utility standard, the factfinder must balance the following factors:

- (1) the usefulness and desirability of the product—its utility to the user and to the public as a whole;
- (2) the safety aspects of the product—the likelihood that it will cause injury, and the probable seriousness of the injury;
- (3) the availability of a substitute product which would meet the same need and not be as unsafe;
- (4) the manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility;
- (5) the user's ability to avoid danger by the exercise of care in the use of the product;
- (6) the user's anticipated awareness of the dangers inherent in the product and their availability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions; and

(7) the feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying liability insurance.”

Tincher, 104 A.3d at 389-390. “[T]he existence and specifications of an alternative design is relevant and even highly probative to prove disputed issues in a products liability case.’ The plaintiff is not **required** to adduce such evidence, but such evidence is often ‘the most persuasive and efficient means of convincing the trier of fact’ of a product's defectiveness.” *Lehmann v. Louisville Ladder Inc.*, 610 F. Supp. 3d 667, 692 (E.D. Pa. 2022), *opinion clarified*, No. CV 21-4626, 2022 WL 2670811 (E.D. Pa. July 11, 2022) (citing *Tincher*, 104 A.3d at 397) (emphasis in original).

Pope and Licurse’s opinions concerning the failure of the tooth’s metallurgic structure are relevant to a design defect theory. They pertain to “[t]he nature of the product,” under a consumer-expectation standard, and to the “likelihood that [the tooth] will cause injury,” under the risk-utility standard.¹³ See, *Lehmann*, 610 F. Supp. 3d at 692; *Tincher*, 104 A.3d at 397. Given that Pope and Licurse do not propose an alternative design, and Plaintiff has not proffered any additional experts, it remains to be seen whether their testimony will be enough for him to meet his burden of proof at trial. (See *Pope Depo* at 120-121; Docket No. 58 at 33-34). Regardless, the Court’s task at this stage is to determine whether these proffered opinions “fit” the case.

However, the Court holds that any conclusory statement by Plaintiff’s experts that the Excavator cab was “defectively designed” due to a lack of proper safety features and precautions would be speculative, does not “fit” the case, and would potentially mislead the jury. See *Fed. Trade Comm’n*, 2020 WL 758727 at *14. Pope testified that the statement in their report that “Caterpillar’s failure to compensate for the lack of ductility with proper safety features and

¹³ Again, the exact theories and standards that Plaintiff intends to pursue have not been disclosed.

precautions constitutes a design defect with respect to the teeth at issue,” was not referring to the design of the spike tooth, but the design of the protection of the operator in the Excavator cab. (*Pope Depo* at 120-121). He continued that it would be “very difficult” to protect the operator from a broken spike tooth which has become a projectile because the Excavator cab already contains “fracture-resistant transparent material,” that he did not know what type of material could be used to provide such protection, and that he did not do any research as to the Excavator. (*Id.*). Therefore, the Court will grant Defendant’s motion, in part, and preclude the experts from testifying as to the Excavator cab’s safety features or lack thereof at trial.

2. Manufacturing Defect

The Court now turns to its analysis of the manufacturing defect theory. “[A] manufacturing defect claim is essentially a claim ‘that something went awry in the manufacturing process ... [and] the finder of fact need only compare the product that caused the injury with other products that were manufactured according to specifications.’” *Chandler*, 340 F. Supp. 3d at 564 (citing *Bergstresser v. Bristol-Myers Squibb Co.*, Civ. A. No. 3:12-1464, 2013 WL 1760525, at *3 (M.D. Pa. Apr. 24, 2013)). In most manufacturing defect product cases, a plaintiff will present direct evidence of the defect; however, where the product with the alleged defect has been destroyed or is otherwise unavailable, the plaintiff may employ the ‘malfunction’ theory of product liability to assert an existence of defect in the manufacturing process. *Barnish*, 980 A.2d at 541. “This theory encompasses nothing more than circumstantial evidence of product malfunction.” *Rogers v. Johnson & Johnson Products, Inc.* 565 A.2d 751, 754 (Pa. 1989).

To show the occurrence of a malfunction, there must be 1) “circumstantial evidence that the product had a defect,” even if the defect cannot be identified, 2) evidence that eliminates “abnormal use or reasonable, secondary causes,” 3) a showing that the defect caused the injury,

and 4) evidence “that the defect existed when it left the manufacturer’s control.” *Barnish*, 980 A.2d at 542–43. There are several types of circumstantial evidence that a plaintiff may advance to prove his case, including:

- (1) the malfunction of the product;
- (2) expert testimony as to a variety of *possible* causes;
- (3) the timing of the malfunction in relation to when the plaintiff first obtained the product;
- (4) similar accidents involving the same product;
- (5) elimination of other possible causes of the accident; and
- (6) proof tending to establish that the accident does not occur absent a manufacturing defect.

Id. at 542–43 (citing, *Rogers* 565 A.2d at 755) (emphasis in original). “The plaintiff does not have to specify the defect in the product,” rather, he need only “present evidence from which a jury can infer the elements of a strict liability action, beyond mere speculation.” *Barnish*, 980 A.2d at 539. Here, the record supports a malfunction theory. See *Ellis v. Beemiller, Inc.*, 910 F. Supp. 2d 768, 774 (W.D. Pa. 2012) (writing that, “the underlying purpose of the malfunction theory is to afford plaintiffs the opportunity to submit their case to a jury in cases where they lack direct evidence of the defect because the product is unavailable through no fault of their own.”).¹⁴

In this Court’s estimation, the proffered expert testimony of Pope and Licurse plainly fits the case and is relevant to a malfunction theory. Pope and Licurse have made “a valid scientific connection to the pertinent inquiry,” as to what caused the tooth to break by applying the facts (i.e., the circumstances of the incident and spike tooth specifications) to their review of the photographs and utilizing an accepted methodology in their field. *Daubert*, 509 U.S. at 591–92. Their conclusions are further supported by their extensive training and experience. *Fed. Trade Comm’n*, 2020 WL 758727 at *14. Defendant’s contention that Pope and Licurse based their

¹⁴ Although appropriate in manufacturing defect cases, the malfunction theory is discouraged in design defect cases because plaintiffs “have access to the entire line of the product and are not disadvantaged by an inability to examine and test the actual product.” *Ellis*, 910 F. Supp. 2d at 779, n. 11.

opinions on assumptions, such as an assumed CVN value, does not justify excluding their testimony, particularly where such assumptions are based on record evidence (i.e., Caterpillar’s product specifications) as challenges to the factual foundation of expert opinions go to the weight of the testimony, not admissibility. *Gucker v. United States Steel Corp.*, No. CV 13-583, 2015 WL 7444641, at *2 (W.D. Pa. Nov. 23, 2015) (citing *Stecyk v. Bell Helicopter Textron, Inc.*, 295 F.3d 408, 414 (3d Cir. 2002)) (“Rule 705, together with Rule 703, places the burden of exploring the facts and assumptions underlying the testimony of an expert witness on opposing counsel during cross-examination.”). Pope and Licurse believe that the spike teeth produced by Caterpillar would not break unless there is a defect in the composition of the materials. (*Pope & Licurse Report; Pope Depo.* at 120; Docket Nos. 53-2; 53-9). They had information that Caterpillar’s spike teeth have a history of breaking, and the subject spike teeth appeared new when Grasinger used them, among other things. (*Pope & Licurse Report; Pope Depo.* at 65-68; Docket Nos. 53-2; 53-9). They eliminated other causes of the accident, such as misuse and corrosion; and pointed out that the operator could not have ascertained or prepared for the incident, as it was a sudden failure. (*Pope & Licurse Report* at 2; *Pope Depo.* 39-40, 65-68; Docket Nos. 53-2; 53-9). Undoubtedly, their opinions would “assist the trier of fact.” See *Schneider*, 320 F.3d at 404; see also, *Barnish*, 980 A.2d at 542–43.

3. “Spoliation”

Defendant lastly argues that Plaintiff’s experts should be excluded at trial because the broken spike tooth was lost or spoliated and Plaintiff should be held responsible for the lost spike tooth. (Docket Nos. 46; 51; 62). Plaintiff naturally disagrees and maintains that his former employer’s loss of the broken spike tooth should not result in his experts being excluded since they

were able to review the photographs and provide their opinions to a reasonable degree of engineering certainty. (Docket Nos. 47; 52; 63).

“Spoliation is usually referenced in instances where evidence has been altered or destroyed.” *Bull v. United Parcel Serv., Inc.*, 665 F.3d 68, 73 (3d Cir. 2012). The burden lies with the moving party “to show that spoliation occurred and what [if any] sanctions are appropriate.” *Fuhs v. McLachlan Drilling Co.*, No. CV 16-376, 2018 WL 5312760, at *13 (W.D. Pa. Oct. 26, 2018)(quoting *Goldrich v. City of Jersey City, et al.*, 2018 WL 4492931, at *7 (D. N.J. Jul. 25, 2018)). To establish intentional spoliation, one must show: “(1) the evidence was in the party’s control; (2) the evidence is relevant to the claims or defenses in the case; (3) there has been actual suppression or withholding of evidence; and (4) the duty to preserve the evidence was reasonably foreseeable to the party.” *Universal Underwriters Ins. Co. v. Dedicated Logistics, Inc.*, Civ. A. No. 11-1153, 2014 WL 7335668, at *4 (W.D. Pa. Dec. 19, 2014) (citing, *Bull*, 665 F.3d at 73). With that said, “the Supreme Court of Pennsylvania ‘has not recognized a cause of action for negligent spoliation of evidence,’” including against third parties. *Atl. States Ins. Co. v. Copart, Inc.*, 609 F. Supp. 3d 379, 391 (E.D. Pa. 2022) (quoting *Pyeritz v. Pennsylvania*, 613 Pa. 80, 32 A.3d 687, 695 (2011)).

Following this precedent, the Court does not believe that exclusion of Plaintiff’s proffered experts is justified due to the loss of the broken spike tooth. In this regard, Defendant admits that the tooth was in the control of Welded, a third party who is not named in this matter. (Docket No. 46 at 4). The record also indicates that both Plaintiff and Defendant were on notice of the accident, it should have been reasonably foreseeable to both parties that litigation was likely before Plaintiff served the Praecipe for Writ of Summons on Defendant in August of 2018, and they each could have taken additional steps to have Welded preserve the spike tooth. (Docket No. 1-1). Indeed,

while Defendant faults Plaintiff's lack of action in securing the spike tooth, the evidence shows that Defendant had access to the August 11, 2017 report from its dealer, Cleveland Brothers, as well as the photographs of the spike tooth, which are stamped "PROPERTY OF CATERPILLAR"; it also received service updates for the Excavator up through June of 2021—well into the course of this litigation. (Docket Nos. 53-5 at 12; 62-3; 62-8; 63-3 at 17; 63-6 at 3). Welded's safety director, Tyson, even alerted OSHA that the manufacturer, presumably Caterpillar, had been notified and was sending a representative to inspect the spike tooth.¹⁵ (Docket No. 47-1). Once again, the weight to be attributed to the experts' testimony in light of the missing spike tooth and Excavator is a question best suited for the jury and will not serve as the basis for exclusion of the Plaintiff's experts' opinions here. *Nelson v. Am. Honda Motor Co.*, 623 F. Supp. 3d 618, 624 (W.D. Pa. 2022) (writing, "the weight of the evidence [is] for a jury to decide.").

VI. CONCLUSION

Defendant has, in essence, requested a bright line rule that an expert be excluded where the object at issue cannot be physically tested, but precedent dictates a flexible approach to admitting expert testimony. *Trask*, 2016 WL 1181428, at *7. As such, the Court believes that the objections Caterpillar has raised go to the weight of the experts' testimony rather than the admissibility. *See In re TMI Litigation*, 193 F.3d at 713. Hence, they will be afforded an opportunity to testify at trial where, "vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence." *Daubert*, 509 U.S. at 596. The Court will, however, limit their testimony as described above.

¹⁵ While Defendant denies that this occurred, Tyson has not appeared in this action to date. (Docket No. 58 at 14).

Accordingly, Caterpillar's Motion [45] seeking to preclude the expert testimony of David Pope and Mark Licurse is GRANTED, in part, and DENIED, in part. An appropriate Order follows.

s/Nora Barry Fischer
Nora Barry Fischer
Senior U.S. District Judge

Date: July 28, 2023

cc/ecf: All counsel of record.